

ABSTRACT

Due to an ever growing shortage of conventional energy sources, there is an increasingly intense interest in harnessing solar energy. The instant invention can contribute to the goal of achieving environmentally clean solar energy to be competitive with conventional energy sources. A novel method is described for manufacturing a transparent sheet with an embedded array of mirrored spheroidal micro-balls for use in a solar energy concentrator, and analogous applications such as optical switches and solar rocket assist. The micro-balls are covered with a thin spherical shell of lubricating liquid so that they are free to rotate in an almost frictionless encapsulation in the sheet. Novel method and apparatus are presented for producing the preferred embodiment of a close-packed monolayer of the array of mirrored micro-balls.